

CLAIMS

I CLAIM:

1. The method of interfacing a transducer element to a communication  
2 network comprising:

4 providing an adaptable transducer interface comprising a programmable  
transducer interface controller for connecting to the transducer element and a programmable  
network interface controller for connecting to the communication network, the transducer  
interface controller being operatively connected to the network interface controller;

6 receiving user selectable transducer information identifying operating  
8 characteristics of the transducer element;

10 receiving user selectable operator interface information identifying display  
parameters interactively arranged for displaying operating data of the transducer element;

12 generating a transducer interface program for converting transducer element  
operating characteristics to user data and storing the transducer interface program in the  
transducer interface controller; and

14 generating a network interface program based on the display parameters for  
creating screen displays using the user data and storing the network interface program in the  
16 network interface controller,

18 the adaptable transducer interface being useable to remotely interface with  
the transducer element over the communication network.

2. The method of claim 1 wherein receiving user selectable transducer  
information identifying operating characteristics of the transducer element comprises  
receiving user entered information.

3. The method of claim 1 wherein receiving user selectable transducer  
information identifying operating characteristics of the transducer element comprises  
providing user selectable options for operating characteristics of the transducer element and  
the user selects from the user selectable options.

4. The method of claim 3 wherein the user selectable options comprise  
a selection of types of transducer sensors.

5. The method of claim 3 wherein the user selectable options comprise  
a selection of types of transducer actuators.

6. The method of claim 1 wherein receiving user selectable operator  
interface information identifying display parameters interactively arranged for displaying  
operating data of the transducer element comprises receiving user entered information.

7. The method of claim 1 wherein receiving user selectable operator  
interface information identifying display parameters interactively arranged for displaying

operating data of the transducer element comprises providing user selectable options for  
4 display parameters and the user selects from the user selectable options.

8. The method of claim 1 wherein generating a transducer interface  
2 program comprises combining preconfigured software modules selected based on the  
received user selectable transducer operating characteristics.

9. The method of claim 8 wherein storing the transducer interface  
2 program in the transducer interface controller comprises downloading the preconfigured  
software modules to the transducer interface controller.

10. The method of claim 1 wherein generating a network interface  
2 program comprises customizing stored HTML web pages.

11. The method of claim 1 wherein generating a network interface  
2 program comprises creating Java Applets based on the display parameters.

12. The method of claim 1 further comprising creating a product label for  
2 the adaptable transducer interface using the user selectable transducer information and the  
user selectable operator interface information.

13. The method of claim 1 wherein providing an adaptable transducer  
2 interface comprising a programmable transducer interface controller for connecting to the  
transducer element comprises providing a microcontroller, a memory and a transducer  
4 interface circuit.

14. The method of claim 1 wherein providing an adaptable transducer  
2 interface comprising a programmable network interface controller for connecting to the  
communication network comprises providing an embedded microweb server.

15. The method of claim 1 wherein the transducer interface controller is  
2 operatively connected to the network interface controller using a transducer independent  
interface.

16. A user adaptable transducer interface for interfacing a transducer  
2 element having a signal interface connection to a communication network comprising:

4 a programmable transducer interface controller having terminations for  
connecting to the signal interface connection of the transducer element;

6 a programmable network interface controller for connecting to the  
communication network, the network interface controller being operatively connected to the  
transducer interface controller;

8 a user configured transducer interface program stored in the transducer  
interface controller for converting user selected transducer operating characteristics to user  
10 data; and

12 a user configured network interface program stored in the network interface  
controller for creating screen displays based on user select display parameters using the user  
data;

14 the programmable network interface controller being connectable to the  
communication network to provide a remote interface with the transducer element over the  
16 communication network.

17. The transducer interface of claim 16 wherein the user configured  
2 network interface program identifies display parameters interactively arranged for  
displaying operating data of the transducer element.

2 18. The transducer interface of claim 16 wherein the transducer interface  
program comprises combined preconfigured software modules selected based on the  
received user selectable transducer operating characteristics.

2 19. The transducer interface of claim 16 wherein the network interface  
program comprises customized HTML web pages.

2 20. The transducer interface of claim 16 wherein the network interface  
program comprises Java Applets based on the display parameters

2 21. The transducer interface of claim 16 wherein the programmable  
transducer interface controller comprises providing a microcontroller, a memory and a  
transducer interface circuit.

2 22. The transducer interface of claim 16 wherein the programmable  
network interface controller comprises an embedded microweb server.